

IN THE CLAIMS

Please amend Claims 1, 8, 16-18, 25, and 33 as indicated below. The following is a complete listing of claims and replaces all prior versions and listings of claims in the present application:

Claim 1 (currently amended): An image processing apparatus comprising:

inputting means for inputting image data described by a command correspond to each part of an image;

interpreting means for interpreting the command to form a bitmap image and to output an attribute information;

scanning means for scanning an original image to output color image data;

generating means for generating flag data indicating attributes of the original image based on [[the]] color image data ~~and indicating the pixel preferring the same image process as the pixel based on the attribute information;~~

first combining means for combining the color image data and the bitmap image; and

second combining means for combining the flag data and the attribute information of the command.

Claim 2 (original): An image processing apparatus according to claim 1, wherein said flag data includes a character flag, a color flag and a halftone dots flag.

Claim 3 (original): An image processing apparatus according to claim 1, wherein the attributes of the image is generated based on a change amount of the color image data.

Claim 4 (original): An image processing apparatus according to claim 1, wherein an image processing is performed for the color image data based on the flag data.

Claim 5 (original): An image processing apparatus according to claim 1, wherein attribute information of the command includes graphic attribute, color attribute, natural image attribute and PDL image attribute.

Claim 6 (original): An image processing apparatus according to claim 1, wherein a combining method of the first combining means is the same as a combining method of the second combining means pixel by pixel.

Claim 7 (original): An image processing apparatus according to claim 1, wherein the second combining means combines a character flag of the flag data and a graphic attribute of the attribute information.

Claim 8 (currently amended): An image processing apparatus according to claim 1, wherein a combining result of the first combining means is compressed by using one

~~compressing~~ compression method and a combining result of the second combining means is compressed by using another compression method, and wherein the compressed results are stored a storage device.

Claim 9 (original): An image processing apparatus according to claim 8, wherein the combining result of the first combining means is compressed by using a irreversible compression method and the combining result of the second combining means is compressed by using a reversible compression method.

Claim 10 (original): An image processing apparatus according to claim 1, wherein at least one of a color space conversion unit and binarizing processing unit for the combined image is controlled by the result of the second combining means.

Claim 11 (original): An image processing apparatus according to claim 10, wherein when a portion is regarded as a character area and a black-and-white area by considering the result of the second combination means, the color space conversion unit converts the image data correspond to the portion by using coefficient of only black.

Claim 12 (original): An image processing apparatus according to claim 10, wherein when a portion is regarded as a character area or a halftone dot area by considering the result of the second combination means, the binarizing processing unit binarizes the image data

correspond using an error diffusion method.

Claim 13 (original): An image processing apparatus according to claim 10, wherein when a portion is regarded as a PDL image area and a natural image area by considering the result of the second combining means, the binarizing processing unit binarizes the image data using dither processing, when a portion is regarded as not to be a PDL image area and to be a halftone dot area by considering the result of the second combining means, the binarizing processing unit binarizes the image data using an error diffusion processing.

Claim 14 (original): An image processing apparatus according to claim 10, wherein when a portion is regarded as a character area by considering the result of the second combining means, sharpness processing is applied to the image data correspond the portion.

Claim 15 (original): An image processing apparatus according to claim 10, wherein when a portion is regarded as a halftone dot area by considering the result of the second combination means, low-pass filter processing is applied to the image data correspond the portion.

Claim 16 (currently amended): An image processing method comprising:
inputting image data described by a command corresponding to each part of an image;

interpreting the command to form a bitmap image and to output attribute information;

scanning an original image to output color image data;

generating flag data indicating attributes of the original image based on [[the]] color image data ~~and indicating the pixel preferring the same image process as the pixel based on the attribute information;~~

combining the color image data and the bitmap image; and

combining the flag data and the attribute information of the command.

Claim 17 (currently amended): A computer program product, comprising a computer readable medium having computer program codes, said product including:

code for inputting image data described by a command correspond to each part of an image;

code for interpreting the command to form a bitmap image and to output attribute information;

code for scanning an original image to output color image data;

code for generating flag data indicating attributes of the original image based on [[the]] color image data ~~and indicating the pixel preferring the same image process as the pixel based on the attribute information;~~

code for combining the color image data and the bitmap image; and

code for combining the flag data and the attribute information of the command.

Claim 18 (currently amended): An image processing apparatus comprising:

- an interface unit arranged to input image data described by a command corresponding to each part of an image;
- an interpret unit arranged to interpret the command to form a bitmap image and to output attribute information;
- a scanner unit arranged to scan an original image to output color image data;
- a generating unit arranged to generate flag data indicating attributes of the original image based on [[the]] color image data ~~and indicating the pixel preferring the same image process as the pixel based on the attribute information;~~
- a first combine unit arranged to combine the color image data and the bitmap image; and
- a second combine unit arranged to combine the flag data and the attribute information of the command.

Claim 19 (original): An image processing apparatus according to claim 18, wherein said flag data includes a character flag, a color flag and a halftone dots flag.

Claim 20 (original): An image processing apparatus according to claim 18, wherein the attributes of the image are generated based on a change amount of the color image data.

Claim 21 (original): An image processing apparatus according to claim 18, wherein the color image data is processed based on the flag data.

Claim 22 (original): An image processing apparatus according to claim 18, wherein attribute information of the command includes graphic attribute, color attribute, natural image attribute and PDL image attribute.

Claim 23 (original): An image processing apparatus according to claim 18, wherein a combining method of the first combine unit is the same as a combining method of the second combine unit pixel by pixel.

Claim 24 (original): An image processing apparatus according to claim 18, wherein the second combine unit is arranged to combine a character flag of the flag data and a graphic attribute of the attribute information.

Claim 25 (currently amended): An image processing apparatus according to claim 18, wherein a combining result of the first combine unit is compressed by using one ~~compressing~~ compression method and a combining result of the second combine unit is compressed by using another compression method~~[[;]]~~, and wherein the compressed results are stored a storage device.

Claim 26 (original): An image processing apparatus according to claim 25, wherein the combine result of the first combine unit is compressed by using a irreversible compression method and the combining result of the second combining unit is compressed by using a reversible compression method.

Claim 27 (original): An image processing apparatus according to claim 18, wherein at least one of a color space conversion unit and binarizing processing unit for the combined image is controlled by the result of the second combining unit.

Claim 28 (original): An image processing apparatus according to claim 18, wherein when a portion is regarded as a character area and a black-and-white area by considering the result of the second combination unit, the color space conversion unit converts the image data corresponding to the portion to data by using coefficient of only black.

Claim 29 (original): An image processing apparatus according to claim 28, wherein when a portion is regarded as a character area or a halftone dot area by considering the result of the second combination unit, the binarizing processing unit binarizes the image data using an error diffusion method.

Claim 30 (original): An image processing apparatus according to claim 28, wherein when a portion is regarded as a PDL area and a natural image area by considering the

result of the second combine unit, the binarizing processing unit binarizes the image data using dither processing and when a portion is regarded as not to be a PDL area and to be a halftone dot area by considering the result of the second combine unit, the binarizing processing unit binarizes the image data using an error diffusion processing.

Claim 31 (original): An image processing apparatus according to claim 28, wherein when a portion is regarded as a character area by considering the result of the second combine unit, sharpness process is applied to the image data of the corresponding portion.

Claim 32 (original): An image processing apparatus according to claim 28, wherein when a portion is regarded as a halftone dot area by considering the result of the second combine unit, low-pass filter processes is applied to the image data corresponding to the portion.

Claim 33 (currently amended): An image processing apparatus comprising:
data inputting means for inputting image data, through an interface, described
by a command correspond to each part of an image;
interpreting means for interpreting the command to form a bitmap image and to
output attribute information;
scanning means for scanning an original image as digital signals pixel by pixel;
storing means for storing the scanned digital signals;
area discriminating means for discriminating areas based on characters of the

original image;

feature data storing means for storing attribute flag data, indicating attributes of the image based on the scanned a digital signal, and indicating the pixel preferring the same image process as the pixel based on the attribute information, discriminated by the area discriminating means corresponding to the scanned digital signals pixel by pixel;

wherein the bitmap image is combined with the scanned digital signal on image storing means[[]], and the attribute information of the command is also combined with the attribute flag data on feature data storing means.

Claim 34 (original): An image processing apparatus according to claim 33, wherein the attribute flag data includes PDL image flag which is information to determine image data correspond to the PDL, and wherein flag data is the scanned digital signal or image data described by the command.

Claim 35 (original): An image processing apparatus according to claim 33, wherein an image processing is performed for the combined bitmap image and the scanned image signal; and wherein the image processes or parameters for the image process are changed based on the combined attribute information and the attribute flag data.

Claim 36 (original): An image processing apparatus according to claim 34, wherein an image processing is performed for the combined bitmap image and the scanned image

signal; and wherein the image processes or parameters for the image process are changed based on the combined attribute information, the attribute flag data and the PDL flag data.